

the container is suspended above the injection site to a height allowed by the catheter when extended.

Subj 17. (Twice Amended) A device for the metered administration of a fluid drug, comprising:

- (a) a housing positioned between an outlet of an ampoule containing a fluid drug and an injection needle; and
- (b) a valve positioned in the housing in a flow cross section of the fluid drug, the valve having an inlet end adjacent the ampoule and an outlet end adjacent the injection needle, wherein the housing pretensions the valve at a contact surface thereof against an aperture of a feed line through the housing to the valve, the contact surface sealingly closing the aperture wherein the valve permits flow of the fluid drug through the valve from the inlet end to the outlet end when a fluid pressure exerted on the inlet end of the valve exceeds a pressure on the inlet end caused by the dead weight of the fluid drug.

Subj 26. (Amended) A device for delivering a fluid medication through a fluid flow pathway to an injection area of a patient, comprising:

a housing:
a container having an outlet, the container received in the housing and containing the fluid medication to be dispensed through the outlet;
a piston carried in the container;
a drive for moving the piston; and
a valve connected to the outlet, wherein the valve is adapted to permit flow of the medication if a force exerted on the valve in the direction of the injection area exceeds a minimum valve opening force, which is equal to or greater than a maximum force that would be exerted on the valve by a fluid column having a height equal to the fluid flow pathway when extended vertically above the injection area.

Sub P1

Please add new claims 27-36 as follows.

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27. (New) A device for the metered administration of a medical fluid through a fluid flow pathway to an injection area of a patient, comprising a valve located along the fluid flow pathway and adapted to permit fluid flow if a force exerted on the valve in the direction of the injection area exceeds a minimum valve opening force, which is equal to or greater than a maximum force that would be exerted on the valve by a fluid column having a height equal to the fluid flow pathway when extended vertically above the injection area.

28. (New) A device for the metered administration of a medical fluid to an injection area of a patient, comprising:

- a) a fluid flow pathway in which fluid travels to the injection area; and
- b) a valve located along the fluid flow pathway and adapted to permit fluid flow if a force exerted on the valve in the direction of the injection area exceeds a minimum valve opening force, which is equal to or greater than a maximum force that would be exerted on the valve by a fluid column having a height equal to the fluid flow pathway when extended vertically above the injection area.

29. (New) The device of claim 28, wherein the fluid flow pathway comprises a catheter.

30. (New) The device of claim 29, wherein the fluid flow pathway further comprises a fluid reservoir.

31. (New) The device of claim 30, wherein the fluid reservoir is an ampoule.

32. (New) The device of claim 30, further comprising a piston movably located within the reservoir.

33. (New) The device of claim 32, further comprising a driven member adapted to move the piston.

34. (New) The device of claim 29, wherein the fluid flow pathway further comprises a needle connected to the catheter and for insertion into the injection area.

35. (New) The device of claim 29, wherein the valve comprises an upstream housing section having a sealing lip, a downstream housing section, and a resilient valve body pretensioned over the sealing lip and annularly clamped between the upstream and downstream housing sections.

36. (New) A method for administering a medical fluid in a metered fashion through a fluid flow pathway to an injection area of a patient, comprising:

- a) increasing a pressure that the medical fluid applies to an upstream surface of a valve so the pressure exceeds a valve opening pressure, the valve opening pressure being the pressure which results in a force on the upstream surface of the valve that is equal to or greater than a maximum force that would be exerted on the valve by a fluid column having a height equal to the fluid flow pathway when extended vertically above the injection area; and
- b) upon reaching the valve opening pressure, flowing medical fluid past the open valve towards the injection area.

REMARKS

The above amendments and these remarks are submitted in response to the Office Action of November 8, 2002. In the Office Action, the Examiner rejected claims 1, 2, 6-9, 15-18, 20-21 and 26 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 3,759,425 (Lee).

In this response, Applicants have amended independent claims 1, 17 and 26 to clarify them. Applicants have also added new independent claims 27, 28 and 36 and new dependent claims 29-35. Applicants respectfully submit that the new claims and the claims as amended are supported by the specification as filed and are patentable over the prior art of record. Accordingly, Applicants request a notice of allowance.